Job Safety Analysis

JSA-2026-0003 — Generated Nov 27, 2026, 9:03 PM CST

OWNER Lumen Grid	LOCATION Mesa Forge Station
UNIT test	EQUIPMENT WORKED ON test
SERVICE test (Scaffolding)	DATE / CREW SIZE November 28, 2026 — 1 crew

BRIEF DESCRIPTION OF WORK
test

WEATHER
75°F, High Humidity (61%), Heat Index 75°F, Wind NE 7 mph

OVERALL RISK SCORE	AI SAFETY GRADE
67/100	**0/10**

Crew Roster

TL	Taylor Longford (Crew Leader)	Not linked to roster

Task-by-Task Breakdown

Task 1: Scaffold Site Prep and Planning

Identified Risks

- Scaffold components contacting or coming within arc-flash distance of energized conductors/equipment **(AI Added)**
- Scaffold collapse due to inadequate footing or unstable base **(AI Added)**
- Overloading or improper configuration of scaffold structure **(AI Added)**

Mitigation Steps

Identify and maintain minimum approach distances from overhead and nearby energized power plant equipment before scaffold layout is finalized. **(AI Added)**

Conduct a documented ground/footing survey before erecting scaffold, confirming load-bearing capacity and use of base plates/mud sills on soft or uneven ground. **(AI Added)**

Verify a competent person inspects the scaffold design and erection plan prior to work, including load capacity signage. **(AI Added)**

AI Suggested Enhancements

> **[Life-critical]** Identify and maintain minimum approach distances from overhead and nearby energized power plant equipment before scaffold layout is finalized. (added to JSA)
> Why it matters: Power plants contain high-voltage equipment and conductors; metal scaffold components can conduct electricity if erected too close to energized sources, causing electrocution or arc flash. This is a well-documented SIF hazard in utility-adjacent scaffold work.
> Regulation/Standard: OSHA 29 CFR 1926.451(f)(6); NFPA 70E
> Energy Source: Electrical

> **[Life-critical]** Verify a competent person inspects the scaffold design and erection plan prior to work, including load capacity signage. (added to JSA)
> Why it matters: Scaffold structures have rated load limits; without competent-person inspection and posted capacity, crews may inadvertently overload platforms leading to structural failure.
> Regulation/Standard: OSHA 29 CFR 1926.451(f)(3)
> Energy Source: Mechanical

> **[Life-critical]** Conduct a documented ground/footing survey before erecting scaffold, confirming load-bearing capacity and use of base plates/mud sills on soft or uneven ground. (added to JSA)
> Why it matters: Uneven or soft ground can cause one or more scaffold legs to settle, leading to a tip-over or partial collapse under load. Scaffold collapse is one of the leading causes of fatalities in construction-type work at industrial sites.
> Regulation/Standard: OSHA 29 CFR 1926.451(c)(2)
> Energy Source: Gravity

Task 2: Scaffold Erection

Identified Risks

- Fall from elevation during scaffold assembly before guardrails are installed **(AI Added)**
- Dropped or swinging scaffold components during material handling **(AI Added)**
- Failure of corroded or damaged scaffold components under load **(AI Added)**

Mitigation Steps

Require 100% fall protection tie-off for workers erecting scaffold above 6 feet, using an independent anchor point rated for fall arrest. **(AI Added)**

Use a tag line and designate a spotter when hoisting scaffold materials to upper levels to prevent struck-by incidents. **(AI Added)**

Inspect all scaffold tubes, couplers, and planks for corrosion, cracks, or damage before use, especially given high humidity conditions at this site. **(AI Added)**

AI Suggested Enhancements

> **[Life-critical]** Require 100% fall protection tie-off for workers erecting scaffold above 6 feet, using an independent anchor point rated for fall arrest. (added to JSA)
> Why it matters: During erection, guardrails are often not yet in place, leaving workers exposed to unprotected edges. Falls from height remain a top cause of fatality in scaffold work.
> Regulation/Standard: OSHA 29 CFR 1926.451(g)(2)
> Energy Source: Gravity

> **[Life-critical]** Use a tag line and designate a spotter when hoisting scaffold materials to upper levels to prevent struck-by incidents. (added to JSA)
> Why it matters: Manual hoisting of poles and planks in confined power plant areas can result in loads swinging or slipping, striking workers below or nearby equipment.
> Regulation/Standard: OSHA 29 CFR 1926.451(h)
> Energy Source: Motion

> **[Life-critical]** Inspect all scaffold tubes, couplers, and planks for corrosion, cracks, or damage before use, especially given high humidity conditions at this site. (added to JSA)
> Why it matters: High humidity accelerates corrosion of metal fittings, weakening load-bearing capacity over time and increasing risk of sudden component failure during use.
> Regulation/Standard: OSHA 29 CFR 1926.451(b)(1); ANSI A10.8
> Energy Source: Mechanical

Task 3: Working on Scaffold Platforms

Identified Risks

- Fall from completed scaffold platform lacking adequate guarding **(AI Added)**
- Dropped tools striking personnel working or passing below scaffold **(AI Added)**
- Heat-related illness during sustained physical work on scaffold platforms **(AI Added)**

Mitigation Steps

Confirm full guardrail systems (top rail, mid rail, toe boards) are installed on all open sides before personnel occupy platforms above 10 feet. **(AI Added)**

Secure all tools with tethers or tool lanyards when working at height to prevent dropped-object hazards to personnel below. **(AI Added)**

Account for heat index and hydration breaks given the humid conditions (61% RH) reported for the shift. **(AI Added)**

AI Suggested Enhancements

> **[Life-critical]** Confirm full guardrail systems (top rail, mid rail, toe boards) are installed on all open sides before personnel occupy platforms above 10 feet. (added to JSA)
> Why it matters: Without complete guardrail systems, workers and tools can fall from platform edges, especially during material transfer or movement along the deck.
> Regulation/Standard: OSHA 29 CFR 1926.451(g)(4)
> Energy Source: Gravity

> **[Life-critical]** Secure all tools with tethers or tool lanyards when working at height to prevent dropped-object hazards to personnel below. (added to JSA)
> Why it matters: Even small hand tools dropped from height can cause serious head injuries to personnel working beneath active scaffold platforms in a power plant setting.
> Regulation/Standard: ANSI/ISEA 121-2018
> Energy Source: Gravity

> Account for heat index and hydration breaks given the humid conditions (61% RH) reported for the shift. (added to JSA)
> Why it matters: High humidity reduces the body's ability to cool via sweat evaporation, increasing heat stress risk even at moderate ambient temperatures like 75°F.
> Regulation/Standard: OSHA 29 CFR 1926.95 (General PPE); NIOSH Heat Stress Guidance
> Energy Source: Temperature

Task 4: Scaffold Dismantling

Identified Risks

- Collapse of partially dismantled scaffold due to improper sequence **(AI Added)**
- Struck-by hazard from falling scaffold components during teardown **(AI Added)**

Mitigation Steps

Dismantle scaffold in reverse order of erection, removing components systematically to avoid creating an unstable partial structure. **(AI Added)**

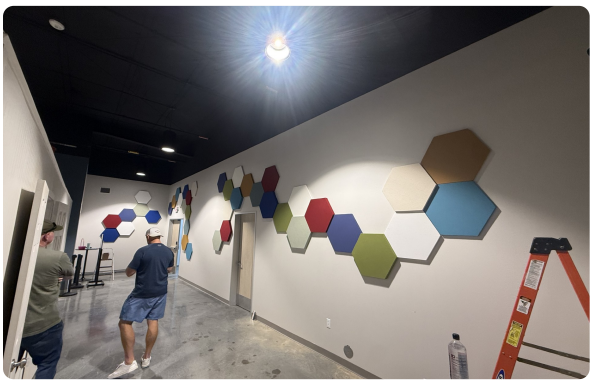
Establish an exclusion zone below the dismantling area to protect other personnel from falling components. **(AI Added)**

AI Suggested Enhancements

> **[Life-critical]** Dismantle scaffold in reverse order of erection, removing components systematically to avoid creating an unstable partial structure. (added to JSA)
> Why it matters: Removing bracing or ties out of sequence can destabilize the remaining structure, causing sudden collapse while workers are still on or near it.
> Regulation/Standard: OSHA 29 CFR 1926.451(e)(1); ANSI A10.8
> Energy Source: Gravity

> **[Life-critical]** Establish an exclusion zone below the dismantling area to protect other personnel from falling components. (added to JSA)
> Why it matters: Dismantling involves releasing clamps and lowering heavy metal components, which can fall or be dropped, posing a serious struck-by risk to anyone below.
> Regulation/Standard: OSHA 29 CFR 1926.451(h)(1)
> Energy Source: Gravity

Work Area Visual Assessment (5 of 5 hazards acknowledged)



Two workers install colorful hexagonal acoustic wall panels in a hallway while a ladder and tools sit nearby in an otherwise clear workspace.

[MEDIUM] Unsecured A-Frame Ladder Near Walkway — An orange A-frame ladder is set up near the active work area with no visible spotter or stabilization; improper use or tipping could cause a fall. (Right side of frame, foreground near water bottle and table) — Acknowledged

[LOW] Trip Hazard from Floor-Level Clutter and Cables — Various items including a small table, stool, and cords are placed on the walking surface, creating potential trip hazards for workers moving through the hallway. (Left-center background near open doorway) — Acknowledged

[LOW] Overhead Lighting Fixture Work — A bright recessed light fixture appears to be actively illuminated/exposed near the ceiling, posing a minor shock or burn risk if contacted during maintenance. (Upper center of frame on dark ceiling) — Acknowledged

[LOW] Worker Without Hard Hat Near Elevated Work — Workers are standing near a ladder and elevated wall panel installation without visible head protection, risking injury from falling tools or materials. (Center of frame, two men standing near wall) — Acknowledged

[LOW] Slip Hazard on Polished Concrete Floor — The smooth, reflective concrete floor appears to have some dark spots possibly from spills or residue, increasing slip risk in a high-traffic work area. (Floor throughout the center of the frame) — Acknowledged

Team Member Signatures

TL	Taylor Longford (Lead)	Not yet signed